



# UNITED STATES DEPARTMENT OF COMMERCE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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	EXAMINER
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ART UNIT	PAPER NUMBER
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DATE MAILED: *11*

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>09/391,783</b>	Applicant(s) <b>Baldwin et al.</b>	
	Examiner <b>First Last</b>	Art Unit <b>1234</b>	
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --			
<p><b>Period for Reply</b></p> <p>A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>three</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.</p> <ul style="list-style-type: none"> <li>- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul>			
<p><b>Status</b></p> <p>1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>Jan 10, 2001</u>.</p> <p>2a) <input type="checkbox"/> This action is <b>FINAL</b>.      2b) <input checked="" type="checkbox"/> This action is non-final.</p> <p>3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i>, 1935 C.D. 11; 453 O.G. 213.</p>			
<p><b>Disposition of Claims</b></p> <p>4) <input checked="" type="checkbox"/> Claim(s) <u>4-7 and 38-49</u> is/are pending in the application.</p> <p>4a) Of the above, claim(s) _____ is/are withdrawn from consideration.</p> <p>5) <input type="checkbox"/> Claim(s) _____ is/are allowed.</p> <p>6) <input checked="" type="checkbox"/> Claim(s) <u>4-7 and 38-49</u> is/are rejected.</p> <p>7) <input type="checkbox"/> Claim(s) _____ is/are objected to.</p> <p>8) <input type="checkbox"/> Claims _____ are subject to restriction and/or election requirement.</p>			
<p><b>Application Papers</b></p> <p>9) <input type="checkbox"/> The specification is objected to by the Examiner.</p> <p>10) <input type="checkbox"/> The drawing(s) filed on _____ is/are objected to by the Examiner.</p> <p>11) <input type="checkbox"/> The proposed drawing correction filed on _____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved.</p> <p>12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.</p>			
<p><b>Priority under 35 U.S.C. § 119</b></p> <p>13) <input type="checkbox"/> Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).</p> <p>a) <input type="checkbox"/> All b) <input type="checkbox"/> Some* c) <input type="checkbox"/> None of:</p> <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Certified copies of the priority documents have been received.</li> <li>2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____.</li> <li>3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> </ol>			
<p>*See the attached detailed Office action for a list of the certified copies not received.</p>			
<p>14) <input type="checkbox"/> Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).</p>			
<p><b>Attachment(s)</b></p> <p>15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)      18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____</p> <p>16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)      19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____      20) <input type="checkbox"/> Other: _____</p>			

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## **DETAILED ACTION**

### ***Supplemental Office Action***

1. The May 22, 2001 Office Action is withdrawn in favor of the instant Supplemental Office Action to correct for inadvertant typographical errors as set forth in the May 22, 2001 Office Action.

### ***Status of Claims***

2. Claims 4-7 and 38-49 (claims 39-49 are newly added) are pending and under examination in the current application.

3. Claims 1-3 and 8-37 were canceled by applicants' September 8, 1999 and January 10, 2001 requests.

### ***Withdrawn Objection(s) and/or Rejection(s)***

4. The objections of Claims 5-7 for typographical errors are withdrawn in light of applicants' amendments.

5. The following rejection of claims 4-7 and 38-39 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention are withdrawn in light of applicants' arguments.

6. The rejection of claims 4-7 and 38-39 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Baldwin et al., claims 1-2 of U. S. Patent No. 6,017,768 (herein referred to as the U.S. '768 Patent), Issued: January 25, 2000, Filed: October 18, 1996 is withdrawn in light of applicants' July 5, 2001 and August 15, 2001 requests.

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***Outstanding Objection(s) and/or Rejection(s)***

7. **For the record it is noted that the October 16, 2000 Office Action included an inadvertant error, wherein only claim 4 was rejected over the prior art as set forth below, when the Examiner intended that claims 4-7 and 38-49 be rejected over the prior art as set forth below.**

**For the sake of clarification, the reiterated rejections below further note specific element(s) taught by corresponding each reference, which is/are more clearly set forth below in bolded text for applicants convenience.**

8. The rejection of claims 4-7 and 38-49 is rejected under 35 U.S.C. 102(b) as being anticipated by Jennings (J. Chem. Soc. Perkin Trans., 1984, page 1733-1738) **is maintained for the following reasons of record.**

The claimed invention is directed to a substituted dihydrobenzopyran compound of formula (II), wherein the following functional group variables are substituted on different positions of the bicyclic fused ring core, wherein the pyran portion of that core is substituted with an oxygen atom at the 1-position, "R<sup>4</sup>" and "R<sup>5</sup>" at the 2-position, and "R<sup>6</sup>" and "R<sup>7</sup>" at the 4-position, while the benzo portion of the ring core at any one of positions 5-8 may be substituted with "R<sup>1</sup>" and "R<sup>2</sup>", wherein each of the aforementioned variables are respectively defined in the claims and/or instant specification.

Jennings discloses: [1] a dihydrobenzopyran compounds and corresponding derivatives that anticipate the compounds of the claimed invention; [2] wherein the aforementioned compounds have functional group substituents that are anticipated and correspond to the R<sup>1</sup>, R<sup>2</sup>, R<sup>4</sup>-R<sup>7</sup> functional group substituents on the dihydrobenzopyran ring core of the claimed invention;

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and [3] for example compound species that anticipate the claimed compounds are substituted with following corresponding groups, wherein: [a] R<sup>1</sup> is either hydroxy or methoxy and or R<sup>2</sup> is hydrogen (**also viceversa, see page 1733, col. 2, line 27, i.e., compound (20), wherein R1 =R3 =OH, R2 = R4 =H**) ; R<sup>4</sup> = R<sup>5</sup> = methyl, R<sup>6</sup> and R<sup>7</sup> taken together = “C=O”(see, page 1735, col. 1, Compounds 24 and 25).

Therefore, Jennings anticipates the claimed invention.

**In the January 10, 2001 Amendment, applicants assert that:**

- [1] Jennings et al. does not disclose compounds encompassed by the claimed invention;
- [2] that the above-identified rejection relies upon compounds 24 and 25 of Jennings et al., wherein it is “point[ed] out that the [structure 24 recited therein] would require one of the R<sup>1</sup> or R<sup>2</sup> of applicants’ formula II to be a methoxy [group], a choice not claimed by applicants [instant invention]”; and
- [3] in light of the foregoing, requests that the instant rejection be withdrawn.

**In response, it is the position of the Examiner that:**

- [1] applicants arguments have been carefully considered, but not found not persuasive for the following reasons:
- [2] Jennings et al. does discloses a compound of the claimed invention, when review in light the above identified rejection (see bolded text) and the instant reference at **page 1733, col. 2, line 27, i.e., which defines a compound, wherein R<sup>1</sup> =R<sup>3</sup> =OH, R<sup>2</sup> = R<sup>4</sup> =H.**;
- [3] **In light of the foregoing, the rejection of record is maintained and deemed proper.**

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9. The rejection of claims 4-7 and 38-49 under 35 U.S.C. 102(b) as being anticipated by EP Patent Application No.: 0 415 566 A1, Publication Date: March 6, 1991 are maintained for the following reasons of record.

EP Appln. No. 0 415 566 A1 discloses: [1] a dihydrobenzopyran compounds and corresponding derivatives that anticipate the compounds of the claimed invention; [2] wherein the aforementioned compounds have functional group substituents that are anticipated and correspond to the R<sup>1</sup>, R<sup>2</sup>, R<sup>4</sup>-R<sup>7</sup> functional group substituents on the dihydrobenzopyran ring core of the claimed invention; and [3] example compound species that anticipate the claimed compounds are substituted with the following groups, wherein: [a] Y is O, R<sup>1</sup> and R<sup>2</sup> (**as recited in the instant EP appln., which corresponds to R<sup>4</sup> and R<sup>5</sup> of the claimed invention**) are independently **hydrogen, lower alkyl, phenyl or substituted phenyl**, R<sup>3</sup> is hydrogen (**which corresponds to the methylene, i.e., CH<sub>2</sub> group adjacent to the R<sup>6</sup> and R<sup>7</sup> groups of the claimed invention**), B is a C=O (which corresponds to R<sup>6</sup> and R<sup>7</sup> of the claimed invention), R<sup>4</sup> is a **hydrogen, OR<sup>5</sup>, wherein R<sup>5</sup> is H or lower alkyl** (which corresponds to **R<sup>2</sup> of the claimed invention**) and “R<sup>7</sup>OCO-A-Z”, wherein Z is oxygen, A is a straight or branched hydrocarbon radical having one to five carbon atoms, and R<sup>7</sup> (R<sup>7</sup> recited therein is distinguished from R<sup>7</sup> of the claimed invention; note that the group **“R<sup>7</sup>OCO-A-Z” corresponds to R<sup>1</sup> of the claimed invention, wherein R<sup>1</sup> is O-(CH<sub>2</sub>)CO<sub>2</sub>H.**

Therefore,EP Appln. No. 0 415 566 A1 anticipates the claimed invention.

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**In the January 10, 2001 Amendment, applicants assert that:**

- [1] EP Appln. No. 0 415 566 A1 does not disclose or anticipate compounds encompassed by the claimed invention;
- [2] in light of the foregoing, requests that the instant rejection be withdrawn.

**In response, it is the position of the Examiner that:**

- [1] applicants arguments have been carefully considered, but not found not persuasive for the following reasons:
- [2] EP Appln. No. 0 415 566 A1. does discloses a compound of the claimed invention, when review in light the above identified rejection, wherein:
  - [a] Y is O, R<sup>1</sup> and R<sup>2</sup> (**as recited in the instant EP appln., which corresponds to R<sup>4</sup> and R<sup>5</sup> of the claimed invention**) are independently **hydrogen, lower alkyl, phenyl or substituted phenyl**;
  - [b] R<sup>3</sup> is hydrogen (**which corresponds to the methylene, i.e., CH<sub>2</sub> group adjacent to the R<sup>6</sup> and R<sup>7</sup> groups of the claimed invention**);
  - [c] B is a C=O (which corresponds to R<sup>6</sup> and R<sup>7</sup> of the claimed invention);
  - [d] R<sup>4</sup> is a hydrogen, OR<sup>5</sup>, wherein R<sup>5</sup> is H or lower alkyl (**which corresponds to R<sup>2</sup> of the claimed invention**);
  - [e] R<sup>6</sup> is a hydrogen or lower alkyl (which corresponds to **R<sup>2</sup> of the claimed invention**) and “R<sup>7</sup> OCO-A-Z”, wherein Z is oxygen, A is a straight or branched hydrocarbon radical having one to five carbon atoms; and

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- [f] R<sup>7</sup> (R<sup>7</sup> recited therein is distinguished from R<sup>7</sup> of the claimed invention; note that the group “R<sup>7</sup>OCO-A-Z” corresponds to R<sup>1</sup> of the claimed invention, wherein R<sup>1</sup> is O-(CH<sub>2</sub>)CO<sub>2</sub>H; and
- [g] see, also compounds V, at page 3, lines 45-50 and compound VI at page 4, lines 40-45, compound I' at page 6, lines 20-25, etc.

[3] **In light of the foregoing, the rejection of record is maintained and deemed proper.**

10. The rejection of claims 4-7 and 38-49 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,268,386 (herein referred to as “the U.S. ‘386 Patent”, Issued: December 7, 1983, Filed July 26, 1990 are maintained for the following reasons of record.

The U.S. ‘386 Patent discloses: [1] a dihydrobenzopyran compounds and corresponding derivatives that anticipate the compounds of the claimed invention; [2] wherein the aforementioned compounds have functional group substituents that are anticipated and correspond to the R<sup>1</sup>, R<sup>2</sup>, R<sup>4</sup>-R<sup>7</sup> functional group substituents on the dihydrobenzopyran ring core of the claimed invention; and [3] example compound species that anticipate the claimed compounds are substituted with the following groups, wherein: [a] Y is O, R1 and R2 are independently hydrogen, lower alkyl, phenyl or substituted phenyl (which corresponds to R4 and R5 of the claimed invention), R3 is hydrogen, B is a C=O (which corresponds to R6 and R7 of the claimed invention), R6 is a hydrogen or lower alkyl (which corresponds to R2 of the claimed invention) and “R<sup>7</sup>OCO-A-Z”, wherein Z is oxygen, A is a straight or branched hydrocarbon

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radical having one to five carbon atoms, and R7 (R7 recited therein is distinguished from R7 of the claimed invention; note that the group “R<sup>7</sup>OCO-A-Z” corresponds to R1 of the claimed invention, wherein R1 is O-(CH<sub>2</sub>)CO<sub>2</sub>H is hydrogen.

Therefore, the U.S. ‘386 Patent anticipates the claimed invention.

**In the January 10, 2001 Amendment, applicants assert that:**

- [1] the U.S. ‘386 Patent A1 does not disclose or anticipate compounds encompassed by the claimed invention;
- [2] in light of the foregoing, requests that the instant rejection be withdrawn.

**In response, it is the position of the Examiner that:**

- [1] applicants arguments have been carefully considered, but not found not persuasive for the following reasons:
- [2] U.S. ‘386 Patent. does discloses a compound of the claimed invention, when review in light the above identified rejection, wherein:
  - [a] Y is O, R<sup>1</sup> and R<sup>2</sup> (**as recited in the instant EP appln., which corresponds to R<sup>4</sup> and R<sup>5</sup> of the claimed invention**) are independently **hydrogen, lower alkyl, phenyl or substituted phenyl**;
  - [b] R<sup>3</sup> is hydrogen (**which corresponds to the methylene, i.e., CH<sub>2</sub> group adjacent to the R<sup>6</sup> and R<sup>7</sup> groups of the claimed invention**);
  - [c] B is a C=O (which corresponds to R<sup>6</sup> and R<sup>7</sup> of the claimed invention);

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- [d] R<sup>4</sup> is a hydrogen, OR<sup>5</sup>, wherein R<sup>5</sup> is H or lower alkyl (**which corresponds to R<sup>2</sup> of the claimed invention**);
- [e] R<sup>6</sup> is a hydrogen or lower alkyl (which corresponds to **R<sup>2</sup> of the claimed invention**) and “R<sup>7</sup>OCO-A-Z”, wherein Z is oxygen, A is a straight or branched hydrocarbon radical having one to five carbon atoms; and
- [f] R<sup>7</sup> (R<sup>7</sup> recited therein is distinguished from R<sup>7</sup> of the claimed invention; note that the group **“R<sup>7</sup>OCO-A-Z” corresponds to R<sup>1</sup> of the claimed invention**, wherein R<sup>1</sup> is O-(CH<sub>2</sub>)CO<sub>2</sub>H; and
- [g] see, also compounds V and VI at col. 4, lines 41-60, etc.

[3] **In light of the foregoing, the rejection of record is maintained and deemed proper.**

*Status of Claims*

11. No claims are allowed in the above-identified application.

*Conclusion*

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Grace C. Hsu, Ph.D., J.D. whose telephone number is (703) 308-7005. The Examiner may be reached during normal business hours, Monday through Friday from 8:30 am to 5:30 pm (EST). A message may be left on the Examiner's voice mail.

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Jythesna Venkat, Ph.D., may be reached at (703) 308-2439. The fax number assigned to Group 1627 is (703) 305-4242. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 1627 receptionist whose telephone number is (703) 308-0196.

BENNETT CELSA  
PRIMARY EXAMINER

Grace C. Hsu, Ph.D., J.D.

August 30, 2001

